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use in such the electronic device, wherein a case is formed with attaching a frame member and a cover member made of resin upon the printed wiring board, but without using an expensive ceramic case, thereby being suitable for mass production of cheap and small-sized electronic devices, as well as being superior in hermetical sealing property of the case formed, so as to protect the built-in electronic device from being deteriorated in the characteristics thereof.

In the Abstract:

Please amend and replace the abstract provided on a separate sheet herewith.

REMARKS

Entry of this amendment in supplement to the amendment filed on September 3, 2002 is respectfully requested.

By the present amendment, a new abstract is provided which conforms with the 150-word maximum word length limitation set forth in 37 C.F.R. 1.72. Also, minor informalities in the background and summary section of the specification noted in reviewing this case have been corrected.

Attached hereto is a marked-up version of the changes made to the specification and abstract by the current amendment. The attached page is captioned "Version with markings to show changes made."


If the Examiner believes that there are any other points which may be clarified or otherwise disposed of, either by telephone discussion or by personal interview, the Examiner is invited to contact applicants' undersigned attorney at the number indicated below.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the

filing of this paper, including extension of time fees, to the deposit account of
Antonelli, Terry, Stout & Kraus, Deposit Account No. 01-2135 (520.40395X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

By 
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703/312-6600

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Page 1, paragraph beginning at line 7 and continuing to page 2, has been amended as indicated below:

The present invention relates to an electronic device, in which an electronic element is hermetically sealed, and a method for manufacturing thereof, and further a printed wiring board being suitable for use in such [the] an electronic device.

Conventionally, an electronic element, such as a SAW (Surface Acoustic Wave) element, etc., is hermetically sealed within an electronic part case, for the purpose of protecting the property or characteristics of the SAW element from being damaged, and it is supplied in the form of an electronic device, such as a SAW filter device, etc. For sealing such [the] an electronic element within the electronic part case, the element must be mounted and hermetically sealed within it, so that it has no contact with members constructing the case, while terminal portions thereof, being electrically connected to the element, must be led out to an outside of the case. For the electronic part case for use in such an arrangement [the sort thereof], a ceramic case is well known. For example, with an electronic part, which comprises a built-in SAW element of surface-mount type therein, a chip of the SAW element is mounted within the ceramic case and it is treated with wire-bonding thereon, thereafter a cover is welded onto the case, thereby sealing between them. Also, the structure is disclosed, in which the SAW element is received or stored within a resin package [with] while using the resin package in combination with a frame made from a resin plate and the cover on a wiring board made from a copper-clad laminate, for example, in Japanese Patent Laying-Open No. Hei 2-179018 (1990) and Japanese Patent Laying-Open No. Hei 10-163647 (1998).

However, the former of those conventional electronic devices mentioned [in the] above is inappropriate for mass production of cheap and small-sized electronic devices in large number thereof, since the ceramic case itself is expensive and is not suitable material for [small-sizing] small-size structures. [and it] Also, it is difficult to take or cut out large numbers of ceramic cases from a large-sized ceramic material.

Also, the latter [of them] device mentioned above has a drawback that the characteristics of the built-in electronic element, such as the SAW filter element, etc., are deteriorated, since [it has such the structure, that] a frame made of resin is attached or adhered upon conductor patterns of the printed wiring board[.]. Specifically, [therefore] bonding power of the resin case [of resin upon] on the conductor patterns on the printed wiring board is weak and sealing property is low between them.

SUMMARY OF THE INVENTION

An object according to the present invention is, for [dissolving] overcoming such [the] drawbacks in the conventional arts [as was] mentioned above, to provide an electronic device[, in which an electronic element is hermetically sealed, and a method for manufacturing thereof as well, and further a printed wiring board being suitable for use in such the electronic device, wherein a case is formed with attaching a frame member and a cover member made of resin upon the printed wiring board, but without using [such the] an expensive ceramic case, thereby being suitable for mass production of cheap and small-sized electronic devices, as well as[, being superior in hermetical sealing property of the case formed, so as to protect the built-in electronic device from being deteriorated in the characteristics thereof.

In the Abstract:

The abstract has been amended as follows:

An electronic device[, comprising:] is provided which includes a substrate of insulating resin having at least a pair of interior terminal portions [for connection upon] on an upper surface thereof[;], an electronic element mounted on the terminal portions [on the upper surface of said substrate], having at least a pair of electrode terminals thereof[;], and a frame member of insulating resin, bonded on the upper surface of said substrate[, and having]. The frame includes a cavity [formed for] to

store [storing said] the electronic element [therein; and a]. A cover member of insulating material[, for] hermetically [sealing] seals over the cavity. [of said frame member, in which said electronic element is stored, wherein] [electrodes] Electrodes are formed at or in vicinity of positions of the terminals of said electronic element [stored within said cavity, for] to electrically [conducting said] conduct the interior terminal portions for connection [to an] outside the device.[, or wherein] Alternatively, roughened surfaces [are] can be formed on metal electrode portions, which are formed on the upper surface of [said] the substrate for electrically conducting said interior terminal portions to [said] exterior terminal portions[, where said frame member is bonded thereupon].